

chamber and pulse oscillation is carried out in the chamber to excite the gas for excimer laser so to oscillate pulsed laser, wherein a predetermined amount of xenon gas in a predetermined concentration is supplied to the gas for excimer laser in the chamber to lower burst and spiking phenomena caused in an excimer laser output. --

-- Thus, the first aspect can readily improve the excimer laser output and stabilize the output without involving complex control because the predetermined amount of xenon gas in the predetermined concentration is supplied to the gas for excimer laser in the chamber to resolve the burst and spiking phenomena caused in the excimer laser output. --

cont

-- The second aspect of the invention relates to an excimer laser device which comprises: a xenon gas cylinder in which the xenon gas to be supplied to the chamber is sealed; sensing means for detecting a concentration of the xenon gas added to the gas for excimer laser in the chamber; and control means for controlling an amount of the xenon gas supplied from the xenon gas cylinder to the chamber based on the concentration of the xenon gas detected by the sensing means. --

-- Thus, the second aspect can readily improve the excimer laser output and stabilize the output by mounting the xenon gas cylinder, the detecting

means and the control means to a conventional excimer laser device because the concentration of the xenon gas added to the gas for excimer laser in the chamber is detected, and the supply amount of the xenon gas sealed in the xenon gas cylinder to the chamber is controlled according to the detected concentration of the xenon gas. --

-- The third aspect of the invention relates to gas for excimer laser used for an excimer laser device which oscillates pulsed laser by exciting gas for excimer laser sealed in a chamber, wherein the gas for excimer laser contains at least a predetermined concentration of xenon gas. --

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-- Thus, the third aspect is configured to contain at least the predetermined concentration of xenon gas in addition to halogen gas in the gas for excimer laser, so that the excimer laser output can be readily improved and the output can be stabilized by merely supplying the gas for excimer laser into the chamber. --

-- The fourth aspect of the invention relates to gas for excimer laser which contains 200 ppm or below of the xenon gas. --

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